

Applic. No. 10/526,340
Response dated 01/04/2007
Response to Not. of Non-Compl. Amdt. of 12/27/06

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-12 (cancelled).

Claim 13 (previously presented). A piezoelectric actuator, comprising:

a stack of a plurality of individual piezoelectric actuator elements disposed between inner electrodes and selectively contracting and expanding along a main oscillation direction in dependence on an applied electric voltage;

first and second metallization strips alternatingly connected with said inner electrodes;

first and second outer electrodes respectively fixed to said first and second metallization strips for electrically contacting the piezoelectric actuator;

said outer electrodes having at least one region configured for compensating for length variations of the piezoelectric actuator in a main oscillation direction by an elastic deformation thereof substantially exclusively in a plane parallel to the main oscillation direction, said outer electrodes having a comb-shaped profile with a meander-form conductor plate and contact teeth for contacting said metallization strips projecting from said conductor plate; and

first and second connection elements respectively connected to said first and second outer electrodes for externally contacting the piezoelectric actuator.

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Claim 14 (previously presented). The piezoelectric actuator according to claim 13, wherein said meander-form conductor plate is tapered along a principal axis thereof.

Claim 15 (previously presented). The piezoelectric actuator according to claim 13, wherein said contact teeth extend parallel to one another and have the same length at a first end, and said contact teeth at said first end are soldered to said metallization strips for establishing an electrical contact.

Claim 16 (previously presented). The piezoelectric actuator according to claim 13, wherein said outer electrodes are bent by an angle $\alpha < 90^\circ$ parallel to a first, straight end region of said contact teeth, for fixing to the piezoelectric actuator.

Claim 17 (previously presented). The piezoelectric actuator according to claim 13, wherein said outer electrodes are mechanically fixed to the piezoelectric actuator by way of an adhesive and said contact teeth are left free of the adhesive for soldering to said metallization strips.

Claim 18 (previously presented). The piezoelectric actuator according to claim 17, wherein said adhesive is configured and disposed to ensure electric insulation between said outer electrodes on one side and said piezoelectric actuator elements and said inner electrodes on the other side.

Claim 19 (currently amended). The piezoelectric actuator according to claim 17, wherein a thickness of a layer of adhesive between said outer electrodes on one

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side and said piezoelectric actuator elements and said inner ~~electrodes~~ electrodes
on the other side is determined by an admixture of particles of a preset size.

Claim 20 (previously presented). The piezoelectric actuator according to claim 17,
wherein said adhesive is a fuel-resistant adhesive.

Claim 21 (previously presented). The piezoelectric actuator according to claim 13,
which comprises an adhesive completely covering the piezoelectric actuator.

Claim 22 (previously presented). The piezoelectric actuator according to claim 13,
wherein said outer electrodes are formed of an etched bronze alloy.